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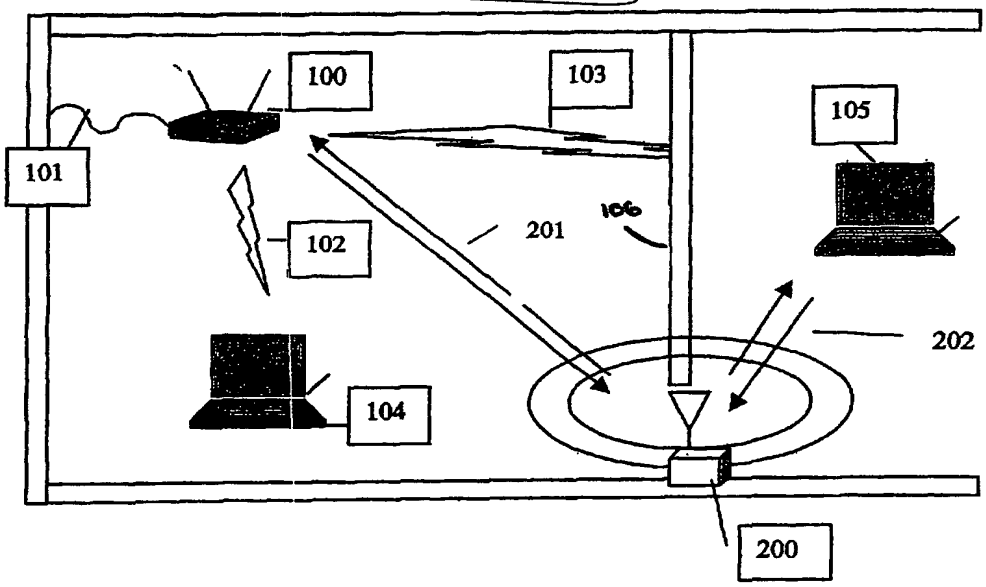
(54) Title: WIRELESS LOCAL AREA NETWORK REPEATER



(57) Abstract: A repeater (200) facilitates wireless communication between a first communication device (100) and a second communication device (105) in a wireless network using a time division duplex protocol for data transmission. The repeater (200) includes a receiver (310, 315) for receiving a signal on either of at least two bi-directional communication frequencies simultaneously. A signal detector (362) is operatively coupled to the receiver (300, 310, 315) for determining if the signal is present on at least one of the two bi-directional frequencies. A frequency converter (320, 321, 323, 324, 360, 361) is for converting the signal present on one of the bi-directional frequencies to a converted signal on the other of the bi-directional frequencies. A transmitter (300, 325, 330, 335, 345, 350) is for transmitting the converted signal on the other of said bi-directional frequencies.

WO 2004/002014 A1